

REMARKSI. Introduction

In response to the Office Action dated April 19, 2002, claims 5, 13, and 21 have been cancelled, and claims 1, 3, 6, 7, 8, 9, 12, 14, 17, 19, and 24 have been amended. Claims 1-4, 6-12, 14-20, and 22-24 remain in the application. Re-examination and re-consideration of the application, as amended, is requested.

II. Prior Art Rejections

In paragraphs (5)-(6) of the Office Action, claims 1-4, 7, 9-13, 15, and 17 were rejected under 35 U.S.C. §102(e) as being anticipated by Hodges, U.S. Patent No. 6,219,751 B1 (Hodges). In paragraphs (7)-(8) of the Office Action, claims 5 and 21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hodges in view of Abe, U.S. Patent No. 5,450,600 (Abe). In paragraph (9) of the Office Action, claims 6, 14, and 22 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hodges in view of IBM Technical Disclosure Bulletin "Limited Distributed DASD Checksum," (IBM). In paragraph (10) of the Office Action, claims 8, 16, and 24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hodges in view of Lyons, U.S. Patent No. 6,101,615 (Lyons).

Applicants have amended the independent claims to include the limitations from original claims 5, 13, and 21. Further, this amendment is filed concurrently with a Statement of Common Ownership. Accordingly, under 35 U.S.C. 103(c), Applicants submit that the Hodges reference, being commonly owned or subject to an assignment to the same entity, at the time the invention was made, shall not preclude the patentability of the present invention.

Thus, Applicants submit that independent claims 1, 9, and 17 are allowable over Hodges, Abe, IBM, and Lyons. Further, dependent claims 2-4, 6-8, 10-12, 14-16, and 18-20, and 22-24 are submitted to be allowable over Hodges, Abe, IBM, and Lyons in the same manner, because they are dependent on independent claims 1, 9, and 17, respectively, and thus contain all the limitations of the independent claims. In addition, dependent claims 2-4, 6-8, 10-12, 14-16, and 18-20, and 22-24 recite additional novel elements not shown by Hodges, Abe, IBM, and Lyons.

III. Conclusion

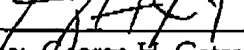
In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicants' undersigned attorney.

Respectfully submitted,

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APPENDIX: CLAIMS IN MARKED-UP FORM

1. (AMENDED) A method of updating parity data in a redundant array of independent disk (RAID) clustered environment comprising:
 - (a) locking parity data, without communicating with other nodes, for data managed in SCSI (small computer systems interface) disks in a RAID clustered system, wherein the locking prevents other nodes from modifying the parity data;
 - (b) reading the parity data;
 - (c) generating new parity data by exclusive oring data from a first node and a second node;
 - (d) writing the parity data to a SCSI disk in the RAID clustered system; and
 - (e) unlocking the parity data, wherein the writing and unlocking steps are combined.
3. (AMENDED) The method of claim 1, wherein the unlocking comprises issuing a RELEASE command.
6. (AMENDED) The method of claim 1 wherein the RAID clustered system is RAID-4.
7. (AMENDED) The method of claim 1 wherein the RAID clustered system is RAID-5.
8. (AMENDED) The method of claim 1 wherein the RAID clustered system is RAID-6.

9. (AMENDED) An apparatus for updating parity data in a redundant array of independent disk (RAID) clustered environment comprising:

(a) a plurality of SCSI (small computer systems interface) storage devices organized in a RAID clustered system;

(b) data stored in the plurality of SCSI storage devices;

[(b)] (c) a first node, operatively coupled to the plurality of SCSI storage devices, that manages storage and retrieval of the data in the plurality of SCSI [data] storage devices, wherein the first node is configured to:

(i) lock parity data without communicating with other nodes, wherein [the] a lock prevents other nodes from modifying the parity data;

(ii) read the parity data;

(iii) generate new parity data by exclusive oring data from two nodes;

(iv) write the parity data to a SCSI disk in the RAID clustered system; and

(v) unlock the parity data, wherein logic for writing and unlocking are combined.

12. (AMENDED) The apparatus of claim 9, wherein the first node is further configured to combine [the] logic for locking and reading.

14. (AMENDED) The apparatus of claim 9 wherein the RAID clustered system is RAID-4.

17. (AMENDED) An article of manufacture, embodying logic to perform method steps of updating parity data in a redundant array of independent disk (RAID) clustered environment, the method steps comprising the steps of:

- (a) locking parity data without communicating with other nodes, wherein the locking prevents other nodes from modifying the parity data;
- (b) reading the parity data;
- (c) generating new parity data by exclusive oring data from two nodes;
- (d) writing the parity data to a SCSI (small computer systems interface) disk in the RAID clustered system; and
- (e) unlocking the parity data, wherein the writing and unlocking steps are combined.

19. (AMENDED) The article of manufacture of claim 17, wherein the unlocking comprises issuing a RELEASE command.

24. (AMENDED) The article of manufacture of claim 17 wherein the RAID clustered system is RAID-6.